Supporting Information: Persistence of SARS-CoV-2 in Water and Wastewater

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Table S1 | Physicochemical characteristics of primary influent used in infectious SARS-CoV-2 persistence study.

Parameter	Measurement
pH	7.98
Chemical oxygen demand (mg/L)	152.7
Ammonia (mg/L)	13.3
Phosphorus (mg/L)	6.0
total suspended solids (mg/L)	189.6

Table S2 | Extra sum-of-squares F test results for comparing the monophasic and biphasic decay models of infectious SARS-CoV-2 decay for high titer wastewater and water at room temperature (20°C), low titer wastewater at room temperature (RT, 20°C), high titer wastewater at 50°C and 70°C.

Experiment Condition	F statistic	p-value
High Titer WW at RT	0.0052	1.00
High Titer Water at RT	2.8860	0.09
Low Titer WW at RT	0.0012	1.00
High Titer WW at 50°C	0.2200	0.88
High Titer WW at 70°C	0.0078	1.00

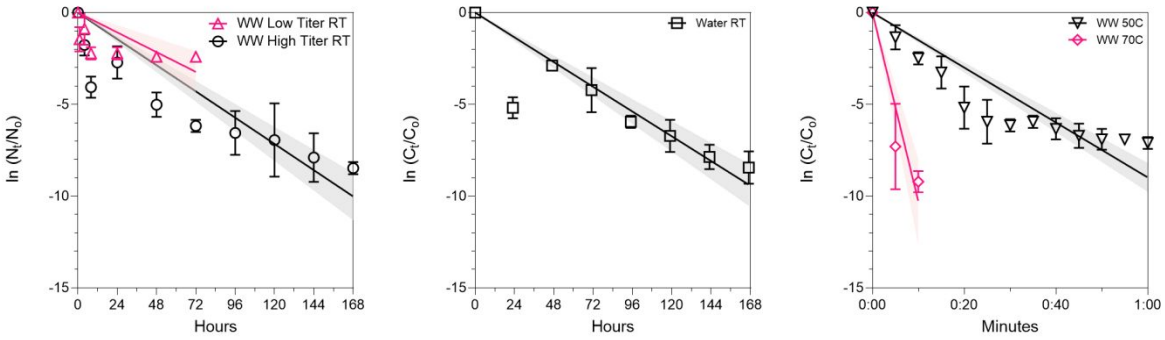

Figure S1 | $TCID_{50}$ measurements in wastewater (WW) inoculated at high and low titers (left panel) and water inoculated at high titer (center panel) incubated at room temperature (20°C, RT) and WW inoculated at high titer and incubated at 50°C and 70°C transformed per equation (1) with linear regressions and the associated 95% confidence region shaded.

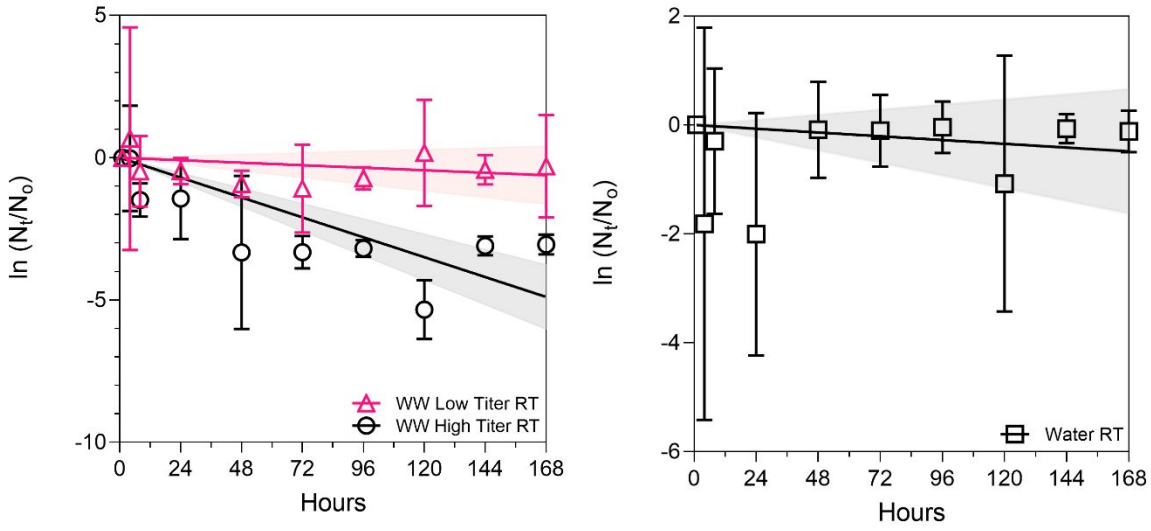

Figure S2 | Persistence of SARS-CoV-2 RNA as determined by RT-qPCR linearized per equation (1) with linear regressions and 95% confidence regions for infectious SARS-CoV-2 inoculated in wastewater (WW) at high titer and low titer at room temperature (20°C, RT) (left panel) and inoculated at high titer in water at RT (right panel). RNA measurements were made from a subsample of the suspensions used to inoculate cell cultures for $TCID_{50}$ measurement.

Table S3 | First-order decay rate constants, *k*, for decay of SARS-CoV-2 RNA in wastewater (WW) inoculated with high and low titer at room temperature (20°C,RT) and with high titer in tap water at RT as estimated by linear regression of transformed gene copy per mL measurements. RNA measurements were made from the same suspensions used to inoculate cell cultures for $TCID_{50}$ measurement.

	WW High Titer RT	**WW Low Titer RT**	**Tap Water High Titer RT**
n	30	30	30
k mean, 95% CI	0.67 $days^{-1}$ (0.54 to 0.86)	0.09 $days^{-1}$ (0.00* to 0.23)	0.07 $days^{-1}$ (0.00* to 0.23)
r^2	0.27	-0.01	-0.11
RMSE	1.6	1.5	1.6
Half life mean, 95% CI	0.99 days (0.81 to 1.3)	7.9 days (3.0 to ∞)	10 days (3.0 to ∞)
T_{90} mean, 95% CI	3.3 days (2.7 to 4.3)	26 days (9.8 to ∞)	33 days (9.9 to ∞)
T_{99} mean, 95% CI	6.6 days (5.4 to 8.6)	52 days (20 to ∞)	67 days (20 to ∞)

*95% CI truncated at 0 in the case of negative values for *k*.